

# Data sheet for three-phase Squirrel-Cage-Motors SIMOTICS



Motor type : 1AV2162A

SIMOTICS GP - 160 M - IM B3 - 2p

|                  |                 |           |
|------------------|-----------------|-----------|
| Client order no. | Item-No.        | Offer no. |
| Order no.        | Consignment no. | Project   |

Remarks

## Electrical data

## Safe Area

| U<br>[V]        | $\Delta$ / Y | f<br>[Hz] | P<br>[kW] | P<br>[hp] | I<br>[A] | n<br>[1/min] | M<br>[Nm] | $\eta$ <sup>3)</sup> |      |                        | $\cos\phi$ <sup>3)</sup> |      |      | I <sub>A</sub> /I <sub>N</sub> | M <sub>A</sub> /M <sub>N</sub> | M <sub>K</sub> /M <sub>N</sub> | IE-CL |
|-----------------|--------------|-----------|-----------|-----------|----------|--------------|-----------|----------------------|------|------------------------|--------------------------|------|------|--------------------------------|--------------------------------|--------------------------------|-------|
|                 |              |           |           |           |          |              |           | 4/4                  | 3/4  | 2/4                    | 4/4                      | 3/4  | 2/4  | I <sub>I</sub> /I <sub>N</sub> | T <sub>I</sub> /T <sub>N</sub> | T <sub>B</sub> /T <sub>N</sub> |       |
| 415             | $\Delta$     | 50        | 11.00     | -/-       | 19.70    | 2955         | 35.5      | 89.4                 | 89.3 | 88.0                   | 0.87                     | 0.82 | 0.73 | 7.4                            | 2.1                            | 3.2                            | IE2   |
| 480             | $\Delta$     | 60        | 12.60     | -/-       | 19.10    | 3555         | 34.0      | 90.2                 | 90.0 | 88.3                   | 0.88                     | 0.85 | 0.78 | 7.4                            | 2.1                            | 3.2                            | IE2   |
| 480             | $\Delta$     | 60        | 11.00     | -/-       | 17.10    | 3560         | 29.5      | 90.2                 | 89.6 | 87.4                   | 0.86                     | 0.82 | 0.74 | 8.2                            | 2.4                            | 3.6                            | IE2   |
| IM B3 / IM 1001 |              | FS 160 M  |           | 67 kg     |          | IP55         |           | IEC/EN 60034         |      | IEC, DIN, ISO, VDE, EN |                          |      |      |                                |                                |                                |       |

Environmental conditions : -20 °C - +40 °C / 1,000 m

Locked rotor time (hot / cold) : 15.7 s | 27.6 s

## Mechanical data

|                                                                                     |                                 |                                 |                            |                                         |
|-------------------------------------------------------------------------------------|---------------------------------|---------------------------------|----------------------------|-----------------------------------------|
| Sound level (SPL / SWL) at 50Hz 60Hz                                                | 70.0 / 82.0 dB(A) <sup>2)</sup> | 77.0 / 89.0 dB(A) <sup>2)</sup> | External earthing terminal | No                                      |
| Moment of inertia                                                                   | 0.0450 kg m <sup>2</sup>        |                                 | Vibration severity grade   | A                                       |
| Bearing DE   NDE                                                                    | 6209 2Z C3                      | 6209 2Z C3                      | Insulation                 | 155(F) to 130(B)                        |
| bearing lifetime                                                                    |                                 |                                 | Duty type                  | S1                                      |
| L <sub>10mh</sub> F <sub>Rad min</sub> 50 60Hz <sup>1)</sup> for coupling operation | 40000 h                         | 32000 h                         | Direction of rotation      | bidirectional                           |
| Lubricants                                                                          | Unirex N3                       |                                 | Frame material             | aluminum                                |
| Regreasing device                                                                   | No                              |                                 | Coating (paint finish)     | Standard paint finish C2                |
| Grease nipple                                                                       | -/-                             |                                 | Color, paint shade         | RAL7030                                 |
| Type of bearing                                                                     | Locating bearing NDE            |                                 | Motor protection           | (A) without (Standard)                  |
| Condensate drainage holes                                                           | -/-                             |                                 | Method of cooling          | IC411 - self ventilated, surface cooled |

## Terminal box

|                          |           |                                |                      |
|--------------------------|-----------|--------------------------------|----------------------|
| Terminal box position    | top       | Max. cross-sectional area      | 16.0 mm <sup>2</sup> |
| Material of terminal box | Aluminium | Cable diameter from ... to ... | 19.0 mm - 28.0 mm    |
| Type of terminal box     | TB1 J00   | Cable entry                    | 2xM40x1,5            |
| Contact screw thread     | M5        | Cable gland                    | 2 plugs              |

## Notes:

I<sub>A</sub>/I<sub>N</sub> = locked rotor current / current nominal  
M<sub>K</sub>/M<sub>N</sub> = locked rotor torque / torque nominal  
M<sub>B</sub>/M<sub>N</sub> = break down torque / nominal torque

1) L10mh according to DIN ISO 281 10/2010  
2) at rated power / at full load

3) Value is valid only for DOL operation with motor design IC411

|                                                                                    |                             |                               |             |                             |                                                                                                              |                |             |  |
|------------------------------------------------------------------------------------|-----------------------------|-------------------------------|-------------|-----------------------------|--------------------------------------------------------------------------------------------------------------|----------------|-------------|--|
| responsible dep.<br>DI MC LVM                                                      | technical reference         | created by<br>DT Configurator | approved by |                             | Technical data are subject to change! There may be discrepancies between calculated and rating plate values. |                |             |  |
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